LIST OF CURRENT CLAIMS

1. (Currently Amended) Configurable large-area display system including a display (114) comprising a plurality of sub-displays that each contain an array of pixels (122), said system further comprising a central controller hardware and software block (110) containing software to control the display system (100) and to generate control data and video signals to be displayed on the display (114); a digitizer (112) that converts said control data and video signals to a digital signal compatible with the display (114); wherein the digitized control data and video signals are passed from one sub-display to the next, and wherein each sub-display is a control unit (116) capable of controlling the individual pixels (122) of said control unit (116) as a function of its position within the display (114) and of the received control data and video signals.

2. (Currently Amended) Configurable large-area display system according to claim 1, wherein said central controller hardware and software block (110) is electrically connected to digitizer (112) via a standard RS-232 connection (111).

3. (Currently Amended) Configurable large-area display system according to claim 1, wherein the digitizer (112) is connected to the display (114) by means of a fiber link (113).

4. (Currently Amended) Configurable large-area display system according to claim 1, wherein, in the event that the distance between two successive control units (116) exceeds a predetermined distance, an intermediate resyncer (118) is used between said two control units (116) to receive and retransmit the control data and video signals.

5. (Currently Amended) Configurable large-area display system according to claim 1, wherein each control unit (116) further includes an AC-to-DC power supply (210), a resynchronizer unit (212) to receive and transmit data, an EEPROM (224), and a controller (216) driving a plurality of pixel clusters (218) that each includes a plurality of modules (220), each containing an array of light-emitting pixel elements (222).

6. (Currently Amended) Configurable large-area display system according to claim 5, wherein the EEPROM (224) contains production data and factory light output measurements, as well as color coordinates for each pixel (222) within modules (220).

7. (Currently Amended) Configurable large-area display system according to claim 5, wherein the controller (216) contains algorithms to parse the control data and video signals received into specific packets associated with the location of a given module (220) within the concerned control unit (116) of display system (100).

8. (Currently Amended) Configurable large-area display system according to claim 5, wherein the controller (216) is provided with means for managing the pulse width modulation associated with driving pixels (222) of each module (220).

9. (Currently Amended) Configurable large-area display system according to claim 5, wherein the control unit comprises four pixel clusters (218), each pixel cluster (218) containing 32 modules (220) that are suitably interconnected for a daisy-chain signal distribution.

10. (Currently Amended) Configurable large-area display system according to claim 5, wherein each module (220) comprises an array of 2 x 2 pixels (222).

11. (Currently Amended) Configurable large-area display system according to claim 1, wherein the pixels (222) are light-emitting diodes (LED).

12. (Currently Amended) Configurable large-area display system according to claim 1, wherein the dimensions of the modules (220) are relatively small, such that they can be assembled to form displays having any 2D or 3D shape.

13. (Currently Amended) Configurable large-area display system according to claim 1, wherein the modules (220) of the display (114) are arranged in a standalone manner so that the display (114) apparently has a transparent ~~structures~~ structure.

14. (Currently Amended) Control unit for use in a configurable large-area display system according to claim 1, said control unit ~~according to any of the preceding claims, characterized in that it is~~ configured as a sub-display comprising a plurality of pixel clusters (218), each comprising a plurality of pixel modules (220) that are sequentially interconnected with each other and each containing an array of light-emitting pixel elements (122).

15. (Currently Amended) Control unit according to claim 14, including an AC-to-DC power supply (210), a resynchronizer unit (212) arranged to receive and transmit control data and video signals; a controller (216) connected to the resynchronizer unit (221) and driving the pixels (222) contained in the modules (220) and clusters (218); and an EEPROM (224) connected to the controller (216).

16. (Currently Amended) Control unit according to claim 15, wherein the EEPROM (224) contains production data and factory light output measurements, as well as color coordinates for each pixel (222) within modules (220).

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17. (Currently Amended) Control unit according to claim 15, wherein the controller (216) contains algorithms to parse the control data and video signals received into specific packets associated with the location of a given module (220) within the concerned control unit (116) of display system (100).

18. (Currently Amended) Control unit according to claim 14, wherein the controller (216) is provided with means for managing the pulse width modulation associated with driving pixels (222) of each module (220).

19. (Currently Amended) Control unit according to claim 14, wherein the pixels (222) are light-emitting diodes (LED).

20. (Currently Amended) Method of operating a large-area display system made in accordance with claim 1, comprising the steps of applying power to the display (114); determining whether the display (114) is to be configured or reconfigured; determining the hardware configuration; setting the desired spacing of the picture elements pixels (222); reading the an EEPROM (224) for obtaining stored production data and factory light output measurements, as well as color coordinates for each pixel (222) within modules (220); transmitting and distributing video signals and control data to the display; parsing the video data, and transmitting the video data stream to the pixel clusters (218).

21. (Currently Amended) Method of operating according to claim 20, wherein, depending on the desired spacing, some intermediate pixels (222), which are spaced apart less further then desired, are ignored for use.